



# CDF Operations Report

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All Experimenter's Meeting  
August 28, 2006

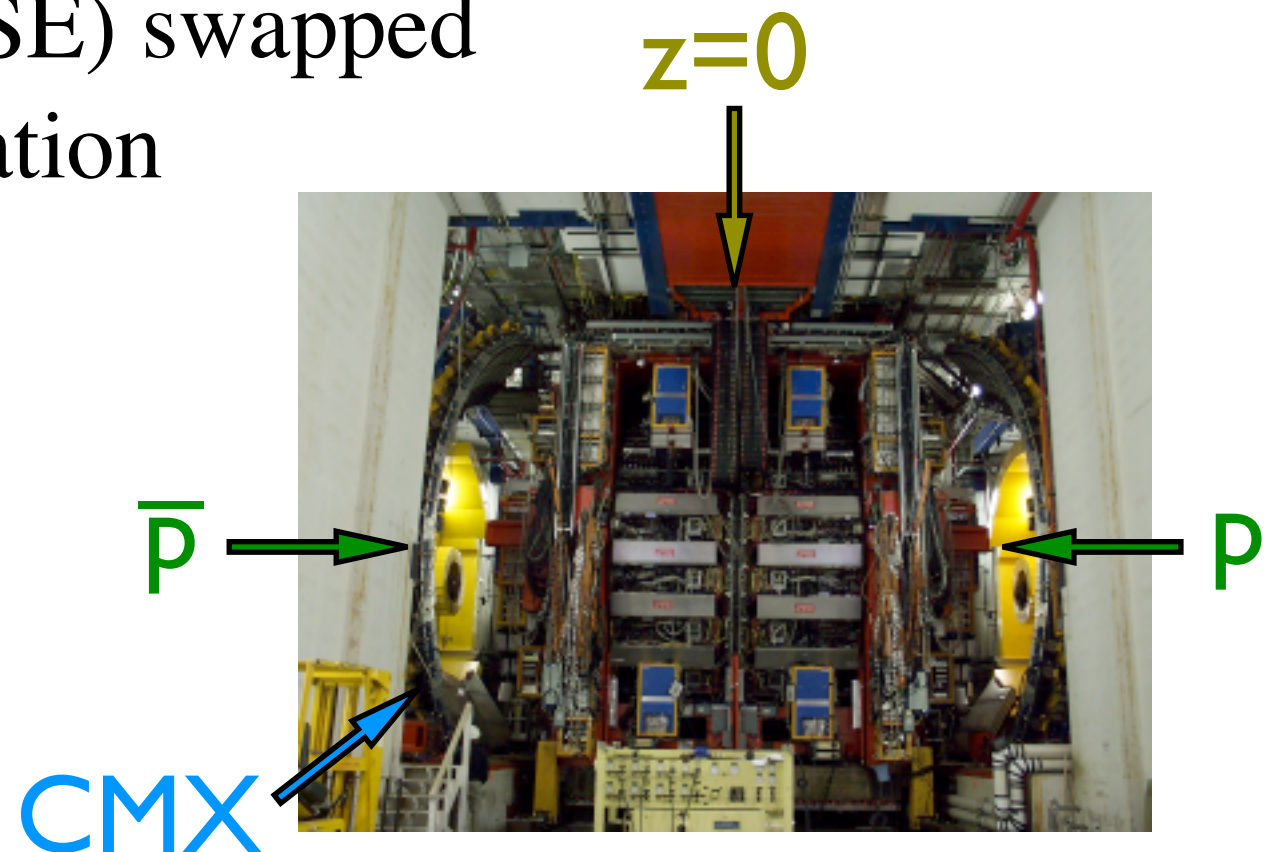
Summary: After two weeks of high efficiency,  
rocky this week.

# Store Summary (Aug 21 - Aug 28)

| Store        | Start Date    | Duration (hours) | CDF Initial Lum<br>1/( $\mu$ b-s) | Delivered Lum<br>(1/pb) | Live Lum<br>(1/pb)     | Lum w/Si<br>(1/pb)     | Comments                                      |
|--------------|---------------|------------------|-----------------------------------|-------------------------|------------------------|------------------------|---|
| 4915         | 21 Aug<br>Mon | 25.1             | 169.1                             | 5.85                    | 4.35<br>74.3%          | 3.58<br>61.2%          | TOF HV crate,<br>COT crate PS                 |
| 4917         | 22 Aug<br>Tue | 30.5             | 183.5                             | 7.00                    | 5.55<br>79.3%          | 4.68<br>67.0%          | forward muon HV,<br>cal crate PS trip, XFT    |
| 4919         | 23 Aug<br>Wed | 6.2              | 195.4                             | 2.89                    | 2.24<br>77.7%          | 2.24<br>77.7%          | cal crate PS trip                             |
| 4925         | 25 Aug<br>Fri | 27.0             | 155.5                             | 5.69                    | 4.94<br>86.9%          | 4.79<br>84.1%          | cen muon eXtension HV;<br>trigger table tests |
| 4927         | 26 Aug<br>Sat | 28.0             | 180.8                             | 6.55                    | 5.63<br>85.9%          | 5.63<br>85.9%          | c-muon upgrade HV                             |
| 4928         | 27 Aug<br>Sun | Running          | 206.2                             |                         |                        |                        | High initial deadtime,<br>otherwise good      |
| <b>Total</b> |               | <b>116.7</b>     |                                   | <b>27.98</b>            | <b>22.71<br/>81.2%</b> | <b>20.92<br/>74.8%</b> |   |

# Detector Access

- Tue Morning (3 hours)
  - COT (outer tracker) readout crate PS swap
  - TOF (time-of-flight) HV control crate swap
- Wed Afternoon (1.25 hr)
- investigate silicon SE PS with drooping voltage
- Thu Morning (day shift +)
  - two silicon power supplies (SE) swapped
  - silicon cooling leak investigation
  - solenoid control software
  - dropped interlocks (sorry)
- Sat Morning (1 hr)
  - CMX (muon) wedge HV



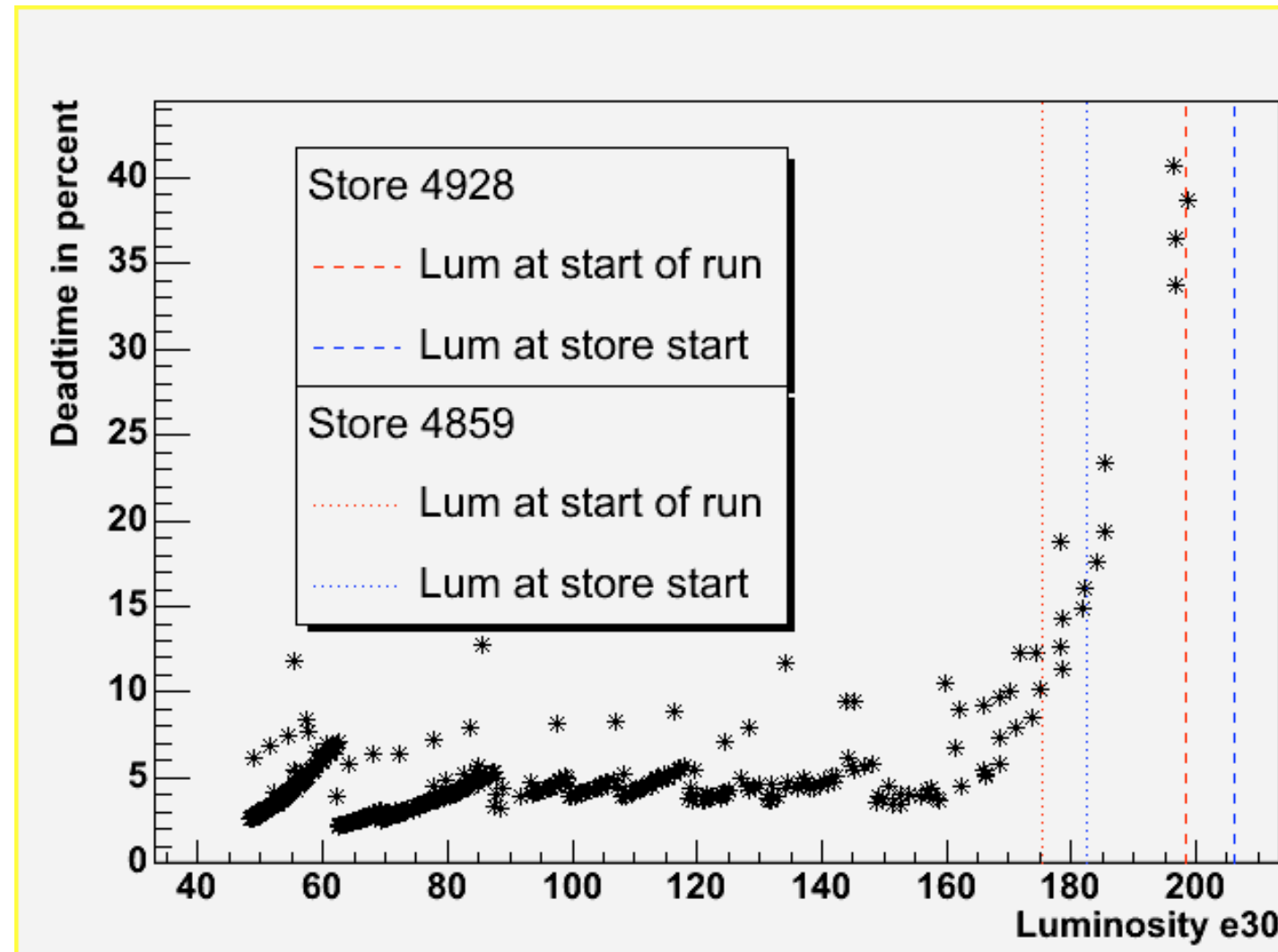
# Silicon Cooling Leak



- Definitely air leaks in East ISL (intermediate silicon layer) cooling lines
- Requires a long access (3+ days), as the work requires opening up the detector (east plug)
- Low priority - problem is manageable so far

# How Can CDF Improve Data Taking?

- Trigger table & high lum
- Fri test had problems
- Increase bandwidth
- Find bottlenecks in DAQ
- Shift efficiency
- Look for outdated instructions
- Can we improve recovery procedures? (ex. readout crate PS trip)
- Continue progress on XFT (stereo trigger) upgrade



# CDF Integrated Luminosities

